

In order to comply with the requirements of 37 CFR 1.125, please find enclosed with this amendment a marked up version of the claims amendments addressing the examiner's concerns.

1. (Currently amended) A pharmaceutical composition comprising substantially optically pure enantiomer diasteriomer (S,S)-sS-adenosyl-1-methionine or a defined non-racemic ratio of (S,—S) -s adenosylmethionine S-adenosyl-1-methionine in their pharmaceutically acceptable salts and a pharmaceutically acceptable carrier

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- 2. (Currently amended) A pharmaceutical composition as described in claim 1 wherein the defined non-racemic ratio of (S,S)-s-adenosylmethionine S-adenosyl-l-methionine is about 1-methionine : (R,S)-s-adenosylmethionine S-adenosyl-l-methionine is about 80% to about 100%: about 20% to about 0% by weight respectively.
- 3. (Currently amended) A pharmaceutical composition as described in claim 1 wherein the defined non-racemic ratio of (S,S)—s-adenosylmethionine -S-adenosyl-1-methionine : (R,S)-s-adenosylmethionine S-adenosyl-1-methionine is about 95 % to about 100%: about 5% to about 0% by weight respectively.
- 4. (Currently amended) A pharmaceutical composition as described in claim 1 wherein the pharmaceutically acceptable salt for each enantiomer-diasteriomer is selected from the group consisting of: a lipophilic salt of S-adenosyl-Ll-methionine(SAM) of the formula S-adenosyl-l-methionineSAM sup.n+ [R--CO-NH--(CH.sub.2).sub.2 --SO.sup.-.sub.3 ].sub.n in which R-CO is a member selected from the group consisting of C.sub.12-C.sub.26 saturated and unsaturated, linear and branched acyl and C.sub.12 -C.sub.26 cycloalkyl-substituted acyl, and n is an integer from 3 to 6 according to the S-adenosyl-l-methionine SAM charge; double salts corresponding to the formula S-adenosyl-l-methionine SAM charge; double salts corresponding to the formula S-adenosyl-

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<u>l-methionine</u> SAM.sup.+.HSO.sub.4.sup.-.H.sub.2 SO.sub.4 .2 CH.sub.3 C.sub.6 salts (S, S) -s-adenosylmethionine S-adenosyl-l-H.sub.4 SO.sub.3 H.; methionine with sulphonic acids selected from the group consisting of 1-n-dodecanesulphonic, 1-nethanesulphonic, methanesulphonic, 2-chloroethanesulphonic, 2-bromoethanesulphonic, 2octadecanesulphonic, d-,1-,d,1-10-3-hydroxypropanesulphonic, hydroxyethanesulphonic, cysteic, d-,1-,d,1-3-bromocamphor-10-sulphonic, camphorsulphonic, 4-2-mesitylbenzenesulphonic, benzenesulphonic, p-chlorobenzenesulphonic, 5-2-naphthalenesulphonic, 1-naphthalenesulphonic, biphenylsulphonic, 1,2-ethanedisulphonic, sulphosalicylic, p-acetylbenzenesulphonic, methanesulphonic acid, ethanesulphonic acid, 1-n-dodecanesulphonic acid, 1-noctadecanesulphonic acid, 2-chloroethanesulphonic acid, 2-bromoethanesulphonic acid,2-hydroxyethanesulphonic acid, d-,l-,d,l-10-camphorsulphonic acid, d-,l-,d,l-3-bromocamphor-10-sulphonic acid, cysteic acid, benzenesulphonic acid, 3acid. 2-mesitylbenzenesulphonic acid. hydroxypropanesulphonic pchlorobenzenesulphonic acid, 4-biphenylsulphonic acid, 2-naphthalenesulphonic 1,2-ethanedisulphonic acid, acid, 5-sulphosalicylic acid, pacetylbenzenesulphonic acid, 1-naphthalenesulphonic acid, o-benzenedisulphonic and chondroitinesulphuric acids, and double salts of said acids with sulphuric acid; S-adenosyl-L-methionine or a pharmaceutically acceptable salt thereof and an effective amount of a lithium salt selected from the group consisting of lithium chloride, lithium bromide, lithium iodide, lithium sulfate, lithium nitrate, lithium phosphate, lithium borate, lithium carbonate, lithium formate, lithium acetate, lithium citrate, lithium succinate and lithium benzoate; water-soluble salt of a bivalent or trivalent metal is a member selected from the group consisting of calcium chloride, ferric chloride, magnesium chloride, and magnesium sulfate; the salt of S-adenosyl-Ll-methionine is a member selected from the group consisting



of salts of S-adenosyl-Ll-methionine with hydrochloric acid, sulfuric acid, ptoluenesulfonic acid, phosphoric acid, formic acid, acetic acid, citric acid, tartaric acid, and maleic acid; and a double salt of S-adenosyl-Ll-methionine with said acids; a salt of S-adenosyl-L1-methionine and a water-soluble polyanionic substance selected from the group consisting of a polyphosphate, metaphosphate, polystyrene sulfonate, polyvinyl sulfonate, polyvinyl sulfate, polyvinyl phosphate, and polyacrylate wherein the stoichiometric ratio of mols of S-adenosyl-Llmethionine to gram-equivalent of the polyanionic substance is from 0.1:1 to 0.5; a S-adenosyl-L1-methionine wherein the polyanionic substance is a polyphosphate, para-polystyrene sulfonate or metaphosphate; a salt of the general formula: S-adenosyl-l-methionineSAM-e.nR(O).sub.m (SO.sub.3 H)p (I) where m can be zero or 1; n is 1.5 when p is 2, and is 3 when p is 1; R is chosen from the group consisting of alkyl, phenylalkyl and carboxyalkyl, in which the linear or branched alkyl chain contains from 8 to 18 carbon atoms, and in particular for producing S-adenosyl-1-methionineSAM-e salts of sulphonic acids, or of sulphuric acid esters, or of dioctylsulphosuccinic acid;

- 5. (Currently amended) A pharmaceutical composition as described in claim 1 wherein the pharmaceutically acceptable salt for each enantiomer diasteriomer is selected from the group consisting of bisulfate; tri-p-toluenesulfonate; chloride, carbonate, bicarbonate, bromide, chloride, iodide, hydrochloride.
- 6.(Currently amended) A pharmaceutical composition as described in claim 1 wherein the pharmaceutically acceptable salt for each enantiomer diasteriomer is selected from the group consisting of double and single salts of S-adenosyl-Ll-methionine with sulphuric acid and p-toluenesulphonic acid.

Claims 7-13 (Cancelled)

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